

Claims

- 1) Scaffold, comprised of biocompatible materials, for tissue culture and cell culture and the production of implants or implant materials, characterized in that the scaffold is comprised of at least one base material (1), which is electrostatically flocked with fibers (3) on at least one side.
- 2) Scaffold according to claim 1, characterized in that the base material (1) is coated on at least one side with an adhesive (2).
- 3) Scaffold according to claim 1 or 2, characterized in that the base material (1) and/or the adhesive (2) and/or the fibers (3) are comprised of resorbable material.
- 4) Scaffold according to claim 3, characterized in that the resorbable fibers (3) are comprised of a resorbable polymer, preferably from the group polyactide, polycaprolactone, polyhydroxybutyrate and polyglycolide, or derivatives and/or copolymers of these polymers, and in that the resorbable base material(1) and/or the resorbable adhesive (2) is selected from the group collagen, collagen derivatives, hyaluronic acid, chitosan and gelatine or from composites of materials from the aforementioned group.
- 5) Scaffold according to one of the claims 1 to 4, characterized in that the length of the fibers (3) is between 0.3 mm and 3 mm and/or the diameter of the individual fibers (3) is between 10 μm and 200 μm .
- 6) Scaffold according to one of the claims 1 to 5, characterized in that the fibers (3) are arranged on the base material (1) with a mean distance from 40 μm to 250 μm .
- 7) Scaffold according to one of the claims 1 to 6, characterized in that at least a part of the fibers (3) are hollow fibers.
- 8) Scaffold according to one of the claims 1 to 7, characterized in that it is colonized with cells.

- 9) Multi-layered scaffold, characterized in that at least two biocompatible scaffolds according to one of the claims 1 to 8 are connected to one another or stacked on top of one another and/or are inserted into one another with their fiber layers (2).
- 10) Multi-layered scaffold according claim 9, characterized in that it contains cavities (5) or a system of cavities.
- 11) Use of a scaffold comprised of a base material (1), that is electrostatically flocked on at least one side with fibers (3), for tissue culture and/or cell culture and/or the production of implants or implant materials.
- 12) Implant or implant material characterized in that it contains a scaffold or multi-layered scaffold according to one of the claims 1 to 10.
- 13) Implant or implant material according to claim 12, characterized in that the scaffold is surrounded by an envelope, preferably a textile structure, a film or a tape.
- 14) Process for the production of a tissue culture or cell culture or an implant material, comprising the following steps:
- a) Production of a scaffold through the electrostatic flocking of a base material (1) with fibers (3) on at least one side;
 - b) Incubation of the scaffold with cells for the colonization of the scaffold with cells and formation of an extra-cellular matrix;
- whereby the base material (1) is removed, where appropriate, after the formation of the extra-cellular matrix.

15) Implant material, which contains cells and an extra-cellular matrix, produced by the following steps:

- a) Production of a scaffold by the electrostatic flocking of a base material (1) with fibers (3) on at least one side,
- b) Incubation of the scaffold with cells for the colonization of the scaffold with cells and the formation of an extra-cellular matrix,
- c) Removal of the base material (1) after the formation of the extra-cellular matrix.